

Application No. 10/057,003
Reply to Office Action dated December 18, 2002

REMARKS

Claims 1 and 3-16 will be pending upon entry of the present amendment. Claims 1, 7, and 13 are amended, claim 2 is cancelled, and claims 14-16 are new.

Applicants thank the Examiner for indicating the allowability of the subject matter of claims 10-12. Accordingly, claims 14-16 are submitted, comprising the matter of claims 10-12, together with matter from claim 7 and matter from intervening claim 9.

The Examiner has rejected claims 1-9 and 13 under 35 U.S.C. § 102(b) as being unpatentable over Li et al. (US 5,945,788).

Claim 1 has been amended to incorporate the subject matter of claim 2, which is herein cancelled. Amended claim 1 recites, in part, "if the lamp current is over a predetermined threshold, repeating the steps of igniting the lamp and monitoring the lamp current *without repeating the preheating step.*" Li fails to teach repeating the steps of igniting the lamp and monitoring the lamp current without repeating the preheating step. Li teaches instead, in response to a failure of the lamp to ignite, to repeat the preheating of the lamp filaments by setting the drive frequency at a preheat frequency for a predetermined preheating period (steps 108-114 of Fig. 1A) before shifting the drive frequency from the preheat frequency to an operating frequency (column 2, line 63 through column 3, line 12).

In rejecting claim 2, whose limitation has been incorporated into claim 1, the Examiner cites reference numerals 104 and 106 of Figure 1A. Reference numeral 104 refers to a flowchart block titled "initialize counter n=1," while reference numeral 106 refers to a flowchart block titled "initialize timer t=0." Neither block is relevant to a discussion of the limitations of claims 1 or 2. The counter n merely tracks the number of attempts to ignite the lamp and the timer t tracks the preheating period. As shown in Figures 1A, 1B, after determining in step 128 that the lamp did not ignite, the Li method returns to re-initialize the timer t (step 106) and repeat the preheating steps 108-114.

Li makes no mention of the advantages associated with, or even the contemplation of, repeating the lamp ignition step and the lamp current monitoring step without repeating the preheating step. Instead, Li stresses the importance of repeating the preheating step. See, for example, column 5, lines 55-59, which reads "a similar situation occurs in the case

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of a...lamp in a low temperature environment. While the lamp may fail to ignite on the first attempt, additional filament preheating will most likely produce successful ignition on a subsequent attempt."

Accordingly, claim 1 is allowable over the cited prior art. Claims 3-6, as dependent claims from claim 1, are also allowable.

Claim 7 has been amended to correct errors in the original drafting of the claim. Amended claim 7 now recites, in part, "in response to determining that the lamp has not ignited within the ignition period, re-attempting to ignite the lamp by *shifting the drive frequency from the preheat frequency to the operating frequency without setting the drive frequency to the preheat frequency for the preheating period.*" The amendment to claim 7 is well supported by the specification, and does not add new matter to the specification. Support for the amendment, for example, may be found beginning on page 4, line 14, which reads "in the case of ignition fault the lamp controller tries to re-ignite the lamp up to a predetermined number of times. It means that only the frequency shifting and monitoring phases are repeated. There is no repetition of the preheating phase."

Li also does not disclose the invention recited in amended claim 7 for reasons similar to those discussed above. In rejecting claim 7, the Examiner has cited Figure 1B and the text found starting at column 4, line 62 to column 7, line 52. As discussed above, Figure 1B shows that, in response to determining in step 128 that the lamp did not ignite, the Li method returns, via line (A), to initialize the timer t (step 106) and repeat the preheating steps 108-114.

The text at column 5, beginning at line 7, reads "if the lamp fails to ignite and begin operating normally by $t = t_{\text{IGNITE}}$ (126), it is concluded that something is wrong and the preheating process (108,...) is repeated, but without reinitializing the counter (104). Upon completion of preheating at $t = t_{\text{PREHEAT}}$ the count is incremented once again. If the count is still less than N_{LIMIT} the shifting process (120,...) is repeated as previously recited. However, if the count is now equal to N_{LIMIT} the protection mode (134,...) follows." Clearly, the Li process calls for a preheat period with each start attempt.

For the foregoing reasons, Li fails to teach the limitations of claim 7 and thus, claim 7 is allowable over the cited prior art. Dependent claims 8-12 are therefore also allowable.

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Claim 13 has been amended to recite, in part, "means for, in response to determining that the lamp has not ignited within the ignition period, re-attempting to ignite the lamp without *setting the drive frequency at a preheat frequency for a preheating period.*" Li fails to teach re-attempting to ignite the lamp without setting the drive frequency at a preheat frequency for a preheating period, but rather, teaches repeating the reheating process with each attempt to start the lamp (column 5, lines 7-10). Accordingly, claim 13 is allowable over the cited prior art.

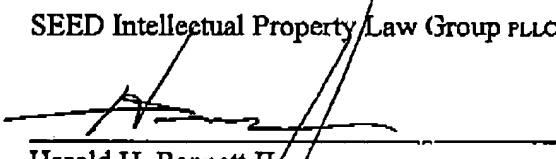
All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

The Commissioner is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

Flavia Borella et al.

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Extension of Time (1 month)

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